



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 4-12

**Issued:** 18 Mar 2022 / 0830L (1230Z)

**Valid:** 18 Mar 2022 / 2313 – 0043L (19/0314 – 0443Z)



**Forecast Discussion:** Strong low pressure will continue to move into the Midwest while a cold front trails south from the low. The front is expected to remain west of the Space Coast area through the launch window. The models continue their trend of developing showers over the central Florida peninsula during the late afternoon and moving them eastward toward the coast. The latest guidance suggests that the showers will diminish as they reach the coast. The primary concern for tonight's launch attempt is the Cumulus Cloud Rule.

In the event of a 24-hour delay, the front moves into and then stalls across northern Florida. The models once again develop showers ahead of the boundary over eastern Florida late tomorrow afternoon. The showers should once again be scattered in nature. The primary concern for the back-up day is the Cumulus Cloud Rule.

Launch Day		Probability of Violating Weather Constraints <sup>1</sup>					
Launch Day	<b>30%</b>	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria <sup>2</sup>		
	<b>Weather/Visibility:</b> Sct Shwrs / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 70°F / 93%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 180° 15 - 20 mph	Cumulus	Scattered	2,500	12,000	<b>Solar Activity:</b> Low		
24-Hour Delay		Probability of Violating Weather Constraints					
24-Hour Delay	<b>30%</b>	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> Sct Shwrs / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 70°F / 100%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Moderate to High	
<b>Liftoff Winds (200'):</b> 210° 12 - 17 mph	Cumulus	Scattered	2,500	12,000	<b>Solar Activity:</b> Low		
Notes	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window. 2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.						
	See <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information						
<b>Note:</b> The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.							
<b>Next Forecast Will Be Issued</b>		AS REQUIRED					